



citizens' bulletin

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Hunting Season Opens Oct. 16



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Prospects for Hunting Season Good

When hunting season opens this year at 7:00 a.m. on Saturday, October 16, sportsmen should find prospects for success at least equal to last year, according to Dennis DeCarli, Chief of the Wildlife Unit.

"The game will be there so opening day success will depend in large part on the weather," he said. The state's most popular game animal, the ring-necked pheasant, will be stocked in the same quantities as in past years, DeCarli said, with a total of approximately 43,000 of the birds put out by DEP and fish and game clubs which have cooperative programs with DEP.

EXPERIMENTAL APPROACH TO STOCKING

The Department will try a new approach to pheasant stocking in some eastern Connecticut areas based on the results of a study at the Larson Lot Wildlife Management Area two years ago.

The experimental method will be to stock the same number of birds on a given area in smaller numbers but at more frequent intervals. This year, for example, the number of drops would be 13 as opposed to the normal five.

According to the wildlife chief, this method will distribute success among a greater number of hunters and increase the recovery rate on stocked birds.

"At Larson Lot we found that the normal 50% recovery rate was increased to 75% by more frequent stocking of the same number of pheasants. This observed increase is consistent with the fact that hunter success peaks the day the birds are stocked and drops rapidly to near zero within three days. Apparently birds that do not wind up in the game bag leave the area or are killed by predators," DeCarli said.

He pointed out that the birds are mature and healthy and provide challenging sport for the hunter when released, but they are not familiar with the area and are probably easy prey for their predatory enemies.

"We hope that by dropping smaller numbers of birds at more frequent intervals we will see an increase in the number of pheasants in the game bag," he said.

CHUKAR RELEASE

Like the ring-necked pheasant, the chukar partridge is a non-native species which has found favor among American sportsmen. This year the Department will release 1,000 of the fast flying birds in suitable upland sites.

According to DeCarli, if the stocking goes smoothly and hunter success is good, a chukar release program may become a regular part of the DEP stocking effort.

GROUSE AND WOODCOCK

The prospects for ruffed grouse this season should be about the same as last year with no major increase in what seems to be a somewhat depressed population.

"We've been waiting for an upswing in the grouse population for a couple of years now," DeCarli said, "but it just doesn't seem to be coming through."

He said the Department has stopped fall grouse line surveys because the results so closely matched the kill records for the immediately previous season that it was not worth the manpower.

"On the basis of the 5,000 returns from the permit required-areas last year," he said, "we project this year's population will be about the same as last year's."

He explained that the harvest of grouse usually reflects the size of the population. A large kill indicates a large population.

"Since last year's kill was low, the breeding population last spring was probably also low," he said, "which means that unless the breeding season itself was extraordinarily successful, we should have about the same number of birds this fall as we did last fall."

Unlike the grouse, the state's other native upland game bird, the woodcock, will be abundant this year.

"Last year's spring singing ground census indicates that the northeast will have plenty of woodcock this fall," he said.

SEASON ON CANVASBACKS & REDHEADS

The big news about waterfowl hunting this year is that seasons have been re-opened on canvasbacks and redheads this year. For the past few years hunting of the two species has not been permitted because breeding ground censuses indicated population levels were too low to sustain open seasons.

According to DeCarli, the most recent census indicates that last summer was a good breeding season in the pothole country of the northern Great Plains and the populations of the two species are now sufficient to withstand limited hunting.

The daily bag limit may include no more than 1 redhead or 1 canvasback. The possession limit (the total number of ducks allowed in the possession of one license holder at any one time) may also include no more than 1 redhead or canvasback. DeCarli said that these limits should provide additional sport without jeopardizing either of the duck populations.

For most of the state, the season for waterfowl opens with the seasons for other game at 7:00 a.m. on Saturday, October 16, but for the coastal areas seaward of the first upstream bridge, the waterfowl season will open at noon on Wednesday, October 13 which offers waterfowlers an extra two and one-half days of hunting in coastal waters, he said.

As in past years, the waterfowl season will be split. For both coastal and inland waters the season will close at sunset on October 30.

The duck season will re-open at noon on December 8 and close finally at sunset on January 8, except for a bonus scaup season in coastal waters which will run from one half-hour before sunrise on January 14 to sunset on January 29.

The second half of the goose season starts one half-hour before sunrise on November 25 and will close for Snow Geese at sunset on December 6 and for Canadas at sunset on January 15. There is no open season on Brant this year because there is some doubt as to the status of the Brant population according to U. S. Fish and Wildlife Service censuses.

For the full breakdown on the waterfowl seasons and bag limits, see the chart below.

FIELD RESEARCH ON LEAD LEVELS IN DUCKS

Duck hunters will be asked by DEP biologists and conservation officers to cooperate in obtaining blood samples from ducks taken in the field. The biologists will be primarily interested in the lead levels in black ducks and DeCarli requested all hunters to cooperate with the biologists when requested to do so in the field.

Cont. on next page.

Waterfowl Season Summary

(All Dates Inclusive - Except Sundays)
SHOOTING HOURS: One-half hour before sunrise to sunset (see exceptions below)

SPECIES	OPEN SEASONS	DAILY BAG LIMIT	POSSESSION LIMIT
Ducks, including scaup and coots***	Oct. 13* - Oct. 15		
Ducks, including scaup and coots	Oct. 16* - Oct. 30	4**	8**
	Dec. 8* - Jan. 8		
Scaup (after regular duck season)***	Jan. 14 - Jan. 29	5	10
Scoter, Old Squaw and Eider Ducks****	Oct. 16* - Oct. 30	7 (in comb.)	14
	Dec. 8* - Jan. 8		
Canada Geese***	Oct. 13* - Oct. 15		
Canada Geese	Oct. 16* - Oct. 30	3	6
	Nov. 25 - Jan. 15		
Snow Geese (including Blue Geese)***	Oct. 13* - Oct. 15		
Snow Geese (including Blue Geese)	Oct. 16* - Oct. 30	2	4
	Nov. 25 - Dec. 6		
Brant	No Open Season		

*Shooting hours exceptions: On Oct. 13 and Dec. 8 - 12:00 noon, and on Oct. 16, 7:00 a.m. to sunset.

**The limits on ducks other than mergansers may include no more than: daily - 2 wood ducks, 2 black ducks, 1 redhead or 1 canvasback; possession - 4 wood ducks, 4 black ducks, 2 redhead and/or canvasback (combined total). The limits on mergansers are daily - 5 (no more than 1 hooded merganser); possession - 10 (no more than 2 hooded mergansers): for coots 15 daily - 30 possession. For the period Oct. 13 through 21, 2 additional blue-winged teal may be added to the regular daily and possession limit of ducks.

***In coastal waters and coastal streams seaward of the first upstream bridge.

****In coastal waters and coastal streams seaward of the first upstream bridge - open season Sept. 25 - Jan. 8.



DEER SEASON

Using the results from last year's first-ever gun season for deer on state land, the Department has increased the number of permits available to shotgun hunters in the deer lottery.

According to DeCarli, the 1975 hunt did not harvest as many of the state's 19,000 deer as had been anticipated.

"Last year was the first time we'd ever had a gun season for deer on state land, so we were extremely conservative on all our assumptions to insure that the harvest would be on the low side rather than the high side. However, the herd can sustain further cropping without affecting its viability, so we have decided to increase the number of deer hunting opportunities on state land by raising the number of permits issued."

In 1975 the Department issued 2,132 shotgun and 900 muzzleloader permits to hunt on state land and 3,617 shotgun permits and 71 muzzleloader permits to hunt on private land. Four thousand nine hundred and ninety archery licenses were issued to hunt on state and private land. One hundred and eighty deer were taken with the shotgun on state land, 238 on private land. Forty-two were taken by muzzleloader on state land, 3 on private land. Fifty-eight were taken by bow on state land and 15 on private land.

This year the number of allowable permits for hunting on state land will be 3,238 for shotgun and 2,155 for muzzleloader. There is no limit on the number of archery permits given or the number of shotgun and muzzleloader permits to hunt on private land.

The 1976 season will run as follows:

The split bow and arrow season begins one half-hour before sunrise on October 23rd, ends at sunset on November 24, and resumes one half-hour before sunrise on December 23 and ends on January 8 at sunset. One deer of either sex may be taken by archers.

The muzzleloader season begins one half-hour before sunrise on November 25 and ends at sunset on December 4. One deer of either sex may be taken by muzzleloader.

The shotgun season for antlered deer only starts one half-hour before sunrise on December 6 and ends at sunset December 8. The shotgun season for either sex begins one half-hour before sunrise on December 9 and ends at sunset December 22. One deer may be taken.

The season bag limit for deer is ONE DEER PER PERSON PER YEAR. The first deer taken by any of the methods listed above is the only deer allowed. Hunters may NOT take one deer by each method.

For comprehensive information on the 1976 deer season, pick up a copy of the 1976 Deer Season Field Guide, available at DEP, Licensing and Revenues Office, Room 124, State Office Building, 165 Capitol Avenue, Hartford, Conn. 06115; your local town clerk's office; DEP Regional Offices; or one of 142 participating sporting goods dealers throughout the state.

SQUIRRELS AND RABBITS

With the state now rebounding from its past bouts with the gypsy moth, oak mast is once again plentiful and the squirrel population is up, DeCarli said.

"The squirrel is a challenging, enjoyable game animal that few of our sportsmen are pursuing. This year especially they're missing a good bet," he said.

"Rabbits continue to be locally abundant where cover is good and should offer hunters the same chance of success as in previous years," DeCarli said.

The squirrel season begins on October 16, runs through December 4, reopens on December 23 and ends January 15, 1977. The daily bag limit is 8.

The cottontail rabbit and European Hare season begins October 16 and ends December 4. The second portion opens on December 23 and ends January 31, 1977. The daily bag limit is 3 for cottontail rabbit and 1 for European Hare. The snowshoe rabbit season runs from November 20 through December 4 and December 23 through January 31. The daily bag limit is 2.

FOR DETAILED INFORMATION ON HUNTING SEASONS AND BAG LIMITS SEE THE OFFICIAL 1976-77 ABSTRACT OF LAWS AND REGULATIONS FOR HUNTING, TRAPPING AND SPORT FISHING AVAILABLE AT MUNICIPAL TOWN CLERK'S OFFICE



Hunters Know Your Silhouettes.

These Birds Are Protected!

Every year, hawks are killed by hunters who mistake them for game birds and by other people who kill them for the sake of killing. All of our birds of prey are protected by federal and state law. People who kill hawks will be prosecuted.

These silhouettes, adapted from a guide prepared by Paul Carrier of the New England Hawk Watch Study and printed with the permission of the Study's coordinators, should help both hunters and birders identify hawks of the Northeast.

BUTEOS

BROAD WINGS AND BROAD ROUNDED TAILS; OFTEN SEEN SOARING IN WIDE CIRCLES HIGH IN THE AIR.



FALCONS

STREAMLINED-LONG POINTED WINGS; LONGISH COMPRESSED TAPERED TAILS; STRONG ROWING WING BEATS; LOSE SOME OF THEIR POINTED WING & TAPERED TAIL LOOK WHEN NOT IN DIRECT FLIGHT.



ACCIPITERS

SHORT, WIDE, ROUNDED WINGS; LONG TAILS: FLAP, FLAP, FLAP-SAIL FLIGHT.



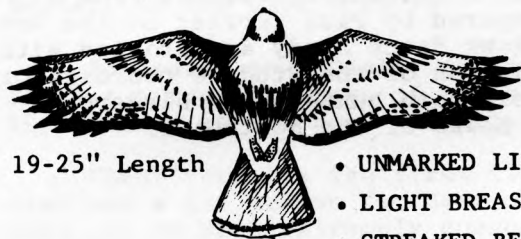
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BUTEOS

BELOW

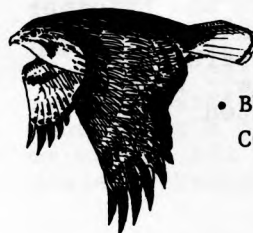
EYE LEVEL

RED-TAILED HAWK



19-25" Length

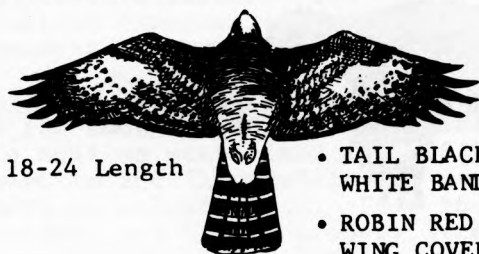
- UNMARKED LIGHT TAIL.
- LIGHT BREAST.
- STREAKED BELLY BAND.



- BEST MARK IS CONSPICUOUS RED TAIL.

Only Buteo with red tail and white chest.

RED-SHOULDERED HAWK



18-24 Length

- TAIL BLACK WITH NARROW WHITE BANDS.
- ROBIN RED BREAST AND UNDER WING COVERTS.
- WINDOWS TOWARD TIP OF WING (Not a Good Mark Alone.)



- TAIL LONGER THAN RED-TAILED OR BROAD-WINGED.
- NOT AS CHUNKY AS OTHER BUTEOS.
- FLIGHT FEATHERS HAVE BLACK & WHITE STRIPED PATTERN.
- HAS A REDDISH BROWN LOOK, ESPECIALLY ON SHOULDERS.

Only Buteo with combination black banded tail, and reddish brown under wing coverts.

BROAD-WINGED HAWK



14-18" Length

- SMALLEST BUTEO, CROW SIZE.
- WHITE & BLACK BANDS ON TAIL.
- SHAPED LIKE SMALL RED-TAIL.
- UNDER WINGS LIGHTER THAN RED-SHOULDERED.



- SHAPED LIKE SMALL RED-TAILED.
- NOT LARGER THAN CROW.
- LOOK FOR BOLD TAIL PATTERN.

Only Buteo with black & white bands on tail.

ROUGH-LEGGED HAWK

A DARK PHASE ALSO OCCURS.



20-23" length

- WINTER VISITOR.
- LARGER WINGS & TAIL THAN OTHER BUTEOS.
- TAIL WHITE WITH BLACK BAND.
- BLACK BELLY, BLACK WRIST MARKS.



- WHITE UPPER TAIL.
- BUFFY HEAD, NECK AND BACK.
- BLACK BELLY.

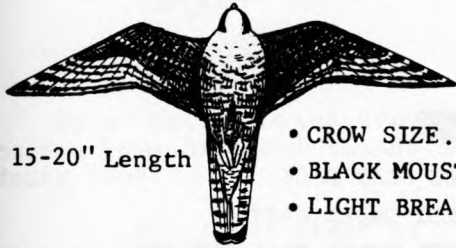
Only Buteo with black belly and white tail with broad black band.

FALCONS (TOP 3)

BELOW

EYE LEVEL

PEREGRINE FALCON (Duck Hawk)



15-20" Length

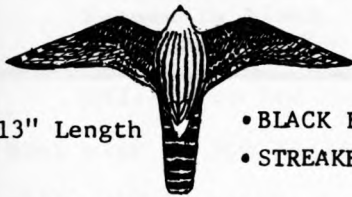
- CROW SIZE.
- BLACK MOUSTACHE.
- LIGHT BREAST & THROAT.



- BACK SLATE GRAY.
- LIGHT BREAST.
- BLACK CAP & MOUSTACHE.

Only crow-sized Falcon with head pattern. (See Gyrfalcon.)

MERLIN (Pigeon Hawk)



10-13" Length

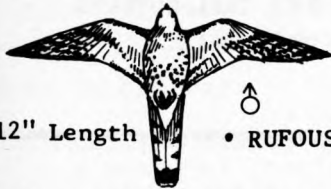
- BLACK BANDED GRAY TAIL.
- STREAKED BREAST.



- BANDED TAIL (Not Red.)
- NO HEAD PATTERN.
- MALE: BLUE GRAY BACK.
- FEMALE: CHOCOLATE BROWN BACK.

Only small Falcon with no red in tail and no outstanding head pattern.

KESTREL (Sparrow Hawk)



9-12" Length

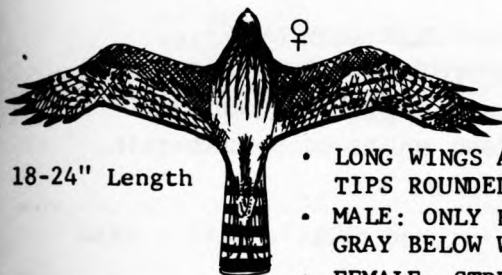
- RUFOUS OR LIGHT BROWN TAIL.



- FEMALE: LIGHT BROWN BACK & TAIL.
- BOLD BLACK & WHITE FACE PATTERN ON BOTH SEXES.
- RUFOUS TAIL, MALE.

Only Falcon with rufous or light brown tail.

MARSH HAWK



18-24" Length

- LONG WINGS AND TAIL, WING TIPS ROUNDED NOT POINTED.
- MALE: ONLY HAWK OVERALL LIGHT GRAY BELOW WITH BLACK WING TIPS.
- FEMALE: STREAKED BROWN BELOW.



- LOOK FOR WHITE RUMP IN ALL PLUMAGES.
- WINGS HELD SLANTED UPWARD FROM SHOULDER WHEN SAILING.

Only Hawk with Flicker-like white rump. (Not tail as Rough-legged.) Shape is best field mark.

OSPREY



21-24" Length

- FLIES WITH KINK IN WINGS.
- ALL CLEAR WHITE BODY.
- BLACK WRIST MARKS.
- VERY LONG WINGS, NEAREST EAGLE SIZE OF ALL HAWKS.



- DARK ABOVE, CLEAR WHITE BELOW.
- FLAPS RATHER SLOWLY.
- BLACK STRIP THROUGH EYE.

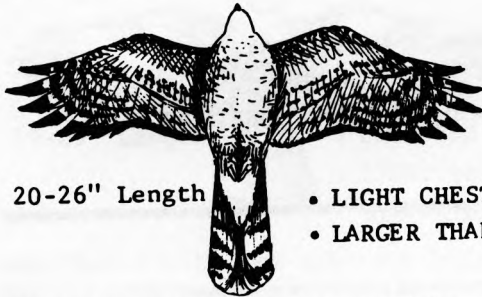
Only Hawk with black wrist marks, and all white body.

ACCIPITERS

BELOW

EYE LEVEL

GOSHAWK



20-26" Length

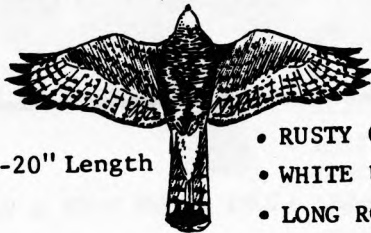
- LIGHT CHEST.
- LARGER THAN CROW.



- BLUE GRAY BACK.
- LIGHT UNDER PARTS.
- WHITE UNDER TAIL COVERTS.
- LARGER THAN CROW.
- WHITE EYE LINE.

No other Accipiter has a light chest.

COOPER'S HAWK



14-20" Length

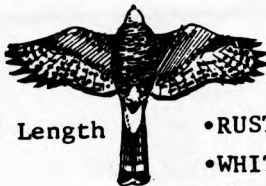
- RUSTY CHEST.
- WHITE UNDER TAIL COVERTS.
- LONG ROUNDED TAIL.



- DARK BLUE GRAY BACK.
- RUSTY CHEST.
- WHITE UNDER TAIL COVERTS
- LONG ROUNDED TAIL.

No other Accipiter had a combination rusty chest and rounded tail.

SHARP-SHINNED HAWK



10-14" Length

- RUSTY CHEST.
- WHITE UNDER TAIL COVERTS.
- LONG SQUARE OR NOTCHED TAIL (Closed.)
- BLUEJAY SIZE (Females Larger.)



- DARK BLUE GRAY BACK.
- RUSTY CHEST.
- WHITE UNDER TAIL COVERTS.
- LONG SQUARE OR NOTCHED TAIL.
- BLUEJAY SIZE.

No other Accipiter has a combination rusty chest and square or notched tail.

This guide was composed to aid in the field identification of hawks. The guide was illustrated by Paul Carrier in conjunction with Donald Hopkins and Gerald Mersereau, coordinators of the New England Hawk Watch Study, and others.

Although hawks are generally observed from below, they are often seen from the side. Both views are included in this guide. Next to each illustration is a list of the most prominent field marks. This is not a complete description, but a collection of those marks most easily observed.

The guide was published as an aid to the New England Hawk Watch Study sponsored by the Connecticut Audubon Council, Massachusetts Audubon Society, Hartford Audubon Society, and many Audubon clubs in New England and New York. Copies may be obtained by writing (single copies — \$1.00 donation) Hawks, P.O. Box 212, Portland, Conn. 06480

Guide designed and illustrated
by Paul Carrier



Your October Environment



Be a "Nature Detective." Can you observe some of these things in the world around you?

*The first frost of the season...
Witch hazel in bloom...Monarch
butterflies preparing to migrate
southward to Mexico...a hunter's
moon...Squirrels storing nuts for
winter...Hawks in migration...
Asters in bloom...fall colors at
their peak...The last songs of
the katydid...Woolly bear cater-
pillars on the march...*

What else do you notice?

In October, brightly colored trees dominate the Connecticut landscape. How many trees can you identify? Is there a predominant color for each type of tree that you can find? Collect and preserve some colorful leaves.

Here is one way:

Cut two pieces of waxed paper in a shape of your choice (a circle, square, oval). Make sure the pieces of paper are larger than the leaf between the sheets of waxed paper; place on an ironing board and cover with a layer of newspaper. With an iron on low setting, press gently back and forth over the newspaper covering the waxed paper underneath. When it is cool, you may hang your preserved leaf in a window.

Make a leaf print:

Simply press a leaf against any smeared surface -- a large inkpad, a sheet of carbon paper, a piece of newly painted wood -- and then press the leaf to a piece of clean paper. You may experiment with different colors of paper, ink, or paint.

Did you know that the color that you observe in an autumn leaf has been there all along? As the days grow shorter, a layer of cork cells forms across the petiole (the stem-like part of the leaf that connects it to the branch) closing off the water supply to the leaf. Without

water, the leaf cells stop manufacturing food. At the same time, chlorophyll, other pigments that are present in the leaf can now be seen giving us the lovely foliage of the autumn season.

October is the nutting month. Look for hickories, beechnuts, acorns, and walnuts. Nuts are just one of the many types of seeds that nature scatters on the autumn landscape. Seeds are, perhaps, the most important part of any plant. Inside each individual seed is the beginning of a new plant. This can be readily observed in a lima bean seed. Soak the seed in water overnight; the next day, carefully remove the seed coat (protective covering) and split the lima bean in half. You should be able to see the embryo, two tiny leaves and a radicle. The lima bean itself is the stored food supply for the new plant.

In order for a seed to germinate (start to grow), the conditions must be just right. What do you think some of the conditions might be? Try inventing some experiments to prove your theories. Will a seed grow without water, soil, light? Does the weather have to be warm and sunny for germination to take place? What conditions produce the healthiest plants? Of the millions of seeds produced in nature each year, only a small number will reach maturity. Many of our so-called weed seeds cannot depend upon man to be planted, nature has equipped them with many unique mechanisms for travel. Thus a seed may grow in an area far from the parent plant and successfully continue as a species.

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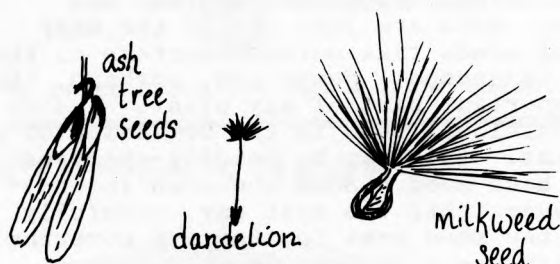
The author of this new column is Penni Chester Sharp. Mrs. Sharp will contribute a regular column of observations on the month-to-month changes in the natural world with suggestions for teachers on how to encourage children to observe some of these changes for themselves.

A former teacher herself, Mrs. Sharp taught science for five years in the elementary grades at Whitby School in Greenwich and developed a curriculum in environmental studies for children ages 9-12. She currently serves as chairperson of the Education Committee of the Greenwich Audubon Society and is pursuing further study in natural history at Southern Connecticut State College.

Here are some ways in which seeds travel:

By Wind

Dandelions and milkweeds have tiny parachutes that carry them on the wind. Maple wings and ash tree seeds whirl like helicopters as they fall from a tree.



By Expulsion

Some seed pods have special spring-like mechanisms and scatter their seeds by exploding. Among these are: Witch Hazel, Violet, Jewelweed, and Oxalis.

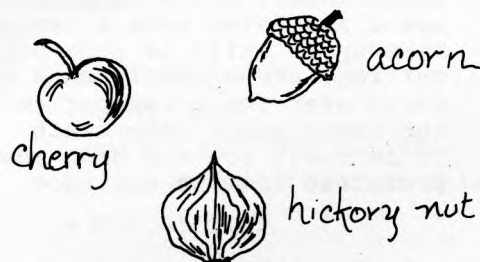


By Animals

Birds may pick up seeds on their feet when they feed on the ground and then carry them long distances. Squirrels may forget where they buried an acorn. Seeds from berries pass undigested through the bodies of the animals that feed on them, thus travelling from one place to another.

By Water

Some seeds float from place to place. The American Lotus (a water lily) produces a seed pod that sails like a boat. Coconuts, the world's largest seeds, also float.



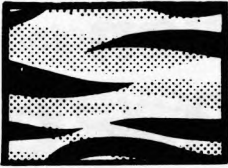
By Hitch-Hiking

The seeds of burdock, tick trefoil, agrimony, and beggar's ticks "hitch" a ride on the clothing of people or fur of animals.



DEP Citizens' Bulletin

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university of connecticut
INSTITUTE OF WATER RESOURCES

On July 31 and August 1 of this summer heavy rains caused the Big Thompson River in Colorado to flood, killing hundreds of people and damaging millions of dollars worth of property. IWR Director Vic Scottron visited the flood site and in this article discusses the causes of the Colorado diaster and draws some comparisons to conditions in Connecticut.

The Big Thompson River drops sharply at an average rate of about 100 feet/mile from Estes Park, Colorado through a narrow canyon until it exits onto the plain at the eastern face of the mountains near Loveland. The whole distance is about 29 miles and the main part of the very intense storm of July 31 and August 1, 1976, occurred in the upper 15 miles of the watershed. The heavy part of the storm fell on the drainage basins of both branches of the river in a region approximately 150 square miles. The total rainfall ranged from about four inches to over ten inches in the upper canyon. Best estimates of peak flows come to about 40,000 cubic feet/second in the lower canyon with average velocities of 20 feet/second and four to eight foot crests. Large boulders, several feet in diameter, were rolled along the waterway. Lesser masses such as cars, trailers and houses were spewed out on the plain at the exit from the canyon. Most of the highway (U.S. 34) and the bridges were demolished.

By way of comparison, the 1955 floods in Connecticut were caused by a storm which was less intense (six to seven inches) but covered a much larger area. The serious flooding in Connecticut occurred in the steeper east-west valleys such as the Mad River and the Quinebaug River, and to a lesser degree in the Hop and Yantic Valleys. The steepness of the Mad River Valley, which is similar to the grade of the Big Thompson, combined with high rainfall intensity destroyed most of the structures along the river in Winsted and produced damage comparable to that of the Colorado flood. The peak flows experienced were also similar to those experienced in the Big Thompson.

In the Colorado disaster, several conditions tended to compound the seriousness of the flood damage and loss of life. First, the highest intensity of rainfall occurred at the beginning of the storm over rocky terrain having very little absorptive capacity. As a result, the

flow in the canyon peaked rapidly. Second, the storm fell at night on a Saturday when sizeable numbers of vacationers were camping. Third, the Big Thompson Canyon provides a natural channel constriction throughout much of its length. The river has no choice in flood times but to deepen severely, in some places by as much as 19 feet. Fourth, in the years since the occurrence of the last major flood, many camping sites and summer homes designed for weekend and vacation use had been built on the flood plain. All four elements, the heavy cloudburst, the summer weekend, the configuration of the canyon, and the occupancy of the flood plain, contributed to the loss of life.

Since the first two factors do coincide at frequent intervals in Connecticut, and the third is present in many of our own river valleys, we must exercise extreme caution with respect to occupancy of flood plains if we are to prevent the loss of life which occurred in Colorado.

One of the major issues raised during the discussion of the Big Thompson Flood and the damage it caused was the lack of an effective warning system. In spite of the rapid peaking of the river, those people who realized the nature of the hazard were able to reach high ground. Unfortunately, many people did not realize the danger soon enough. The storm was expected to move eastward over the plains and to dissipate itself harmlessly over flat agricultural land. The small land area covered by the Big Thompson storm, coupled with failure to recognize the intensity of rainfall, delayed storm warnings until several hours after the damage was done.

Many lessons may be learned by studying past catastrophes, like the flood damage created by the local, intense rainfall in the Big Thompson area. Since Connecticut can expect to be visited by such storms at random intervals, it is to be hoped that we will work continuously to provide better rational solutions to anticipate and manage these natural occurrences. We must continue our efforts at early detection and warning of flood causing rains, we must avoid development on the flood plains of our rivers, and we must prevent constrictions in the flow path of our rivers through careful design of bridges and sensible siting of buildings.

New Environmental Education Service Center Opens

The future of environmental education in Connecticut is substantially brighter with the opening of a new environmental education service center in New Haven in September. The Environmental Education Center (EEC), was formed in response to the need for stronger programs in environmental education as expressed by schools in the south central area of the state. The EEC is part of Area Cooperative Educational Services (ACES), a regional education center. ACES was formed in 1968 by the cooperative efforts of boards of education of school districts in south central Connecticut.

According to Center Director Larry Schaefer, the EEC will work to help schools and teachers build environmental education into their curriculum. He said, "We plan to assist schools in developing their own environmental education programs. Of course, the direction will have to come from an individual school; we want to develop programs that meet their goals and needs."

Area teachers at all levels and from all disciplines will be able to use the Center's resource library of over 1,000 curriculum guides and teacher guides, as well as a collection of books, pamphlets and articles on environmental concerns. A media library includes 40 environmental films, slides, games and simulations.

In addition to providing a library for environmental educators, the EEC staff has developed several workshops ranging from a general overview of environmental education to how to integrate environmental education into various disciplines, to the development of school sites. The full list of workshops, available on request, is varied and extensive.

In addition, a newsletter will be published for EEC members. The goal of the newsletter, Schaefer said, is to facilitate the sharing of ideas and experiences of the many teachers already involved in environmental education with those that are only beginning in this area. Each issue will contain a section on upcoming events, reviews of new resources, as well as an activity keyed to a current issue or a season of the year.

The first major event for the Center will be a workshop on Teacher's Convention Day, October 29, 1976. The workshop is entitled "How to Use Whatcha Got." It will focus on environmental education ideas, activities and resources that teachers of all disciplines and grade levels can use in their classroom and on their school site with little expense. A variety of workshop sessions including environmental arts and crafts, values clarification and environmental education, outdoor biology activities and a mini-film festival will give teachers materials and ideas for school use. As the workshop is limited to 100 people, Schaefer encouraged teachers to call the EEC early for registration information.

The EEC is involved in another project called Computer Based Resource Units (CBRU) in environmental education. Sponsored by the Connecticut State Department of Education and the Department of Environmental Protection, the program will offer teachers a cost free collection of activities and ideas that are tailor-made for each teacher's needs. On a request form, a teacher specifies learning objectives, the topic of interest and student's interest and gives background information about their specific class including class reading level. When a central office receives the form, an extensive print-out containing information, activities and a bibliography that pertains to the chosen objectives is sent to the teacher. Schaefer and Jane Hart, the EEC Teaching Specialist, will be arranging a network of short workshops around the state to assist teachers in ordering the CBRU's. The first year's program will be limited to 1,000 Connecticut teachers.

"We hope that the program will be operational this school year," he said, "but there are a number of administrative and legal hurdles which must be cleared first," Schaefer said.

For more information about the Environmental Education Center or their programs send for a brochure or call:

Environmental Education Center
c/o ACES
800 Dixwell Avenue
New Haven, Connecticut 06511
562-9967 or 1-800-922-1567

SCS can help you

Prevent Soil Erosion

by Chris Janus

Editorial Assistant

Soil Conservation Service, USDA

Soil erosion....A problem not often thought about until it has been encountered. Yet its effects can be devastating -- to the left and right mountainous gullies, barren of trees and vegetation, the sides scarred with huge, winding channels and littered with boulders. And every time it rains it gets worse.

Preventing such unnecessary erosion is part of the job of the Soil Conservation Service and the Soil and Water Conservation Districts.

The eight Connecticut districts sponsor on-going information programs, offering on-site assistance when requested and meeting regularly with town planners and soil engineers.

Over the years district members have learned that the most effective way to control erosion is through the development of a conservation plan. The SCS, in cooperation with other state agencies and representatives of local industry, has recently updated its Erosion and Sediment Control Handbook. This handbook has become a popular guide to those who make land use changes in urban and suburban areas.

One of the most common causes of soil erosion is runoff from construction sites. Such erosion can be effectively controlled by building on soils that are suitable for development, leaving the soil bare for the shortest possible time, and by controlling any runoff that occurs during construction.

The speed and direction of runoff can be controlled by a variety of measures that cause early sedimentation and safe release of excess runoff water downstream. Debris and sediment basins, for example, reduce the velocity of the runoff, which in turn slows down erosion. Diversions (channels constructed across the slope for the purpose of intercepting water) redirect runoff away from areas of critical erosion. Subsurface drains and concrete channels also serve to intercept and redirect runoff water. Grassed waterways dispose of water from diversions and other areas.

Basically there are two types of erosion and sediment control measures: mechanical and vegetative. Mechanical measures, such as those described above, are used to reshape the land to inter-

cept, divert, convey, retard or otherwise control surface runoff. Vegetative measures provide temporary cover to control erosion during construction and long-lasting cover after construction is completed. Such measures include using mulches or cover crops such as shrubs and grasses.

Mulch use is essential for homeowners interested in reducing soil erosion and establishing good stands of grasses on steep slopes and other areas where it is difficult to establish plants. Materials most widely used for mulching are straw, hay and certain processed materials. Hay is most often used in Connecticut because it is most readily available.

Mulching reduces runoff and allows more water to infiltrate the soil. It also reduces the loss of soil moisture by evaporation, holds seed, lime and fertilizer in place and reduces seedling damage by keeping surface layers in place.

Farmers come into contact with even more serious erosion problems than the average homeowner. Water from rain or snow that runs off the surface of farm land instead of sinking into the soil can cause great damage if not controlled. Flowing over unprotected land, it loosens and carries away valuable topsoil. Further damage from siltation results when this soil is deposited in stream channels and reservoirs and on valley floors.

Farmers have learned to reduce the amount of surface runoff by rotating crops and protecting the soil with trees and grasses and crop residues. By practicing contour cultivation, strip cropping, and terracing, farmers can control the erosion of their soil.

If homeowners and farmers follow the necessary methods to avoid erosion, their homes and crops will be better for the effort. Assistance is available from the local Soil Conservation District in carrying out erosion and sediment control practices.

SCS Field Offices in Connecticut

County	Town	Phone
Fairfield County	Bethel	743-5453
Hartford County	Warehouse Point	623-8607
Litchfield County	Litchfield	567-8288
Middlesex County	Haddam	345-4511
New Haven County	Wallingford	269-7509
New London County	Norwich	887-4163
Tolland County	Rockville	875-3881
Windham County	Brooklyn	774-0224



DEP Calendar

Public Hearings Oct., 1976

Air Compliance

October 25, 1976 - 10:00 a.m.
State Office Building, Room 161
165 Capitol Ave.
Hartford, Conn.

Purpose: To appeal Civil Assessment Notice
No. 3-0001.

B. N. Beard Co.
Derby, Conn.

Water Resources

October 26, 1976 - 7:00 p.m.
Milford City Hall Auditorium
25 West River St.
Milford, Conn.

Purpose: For comment on the proposed
bounds of the tidal wetlands in the City
of Milford.

Water Compliance

October 19, 1976 - 8:00 p.m.
Pomperaug Regional H. S., All-Purpose Room
Peter Rd.
Southbury, Conn.

Purpose: To request a permit to discharge
26,000 gallons per day of treated domestic
waste to the Pomperaug River.

Pomperaug Regional School District No. 15
P. O. Box 665
Middlebury, Conn. 06762

Permits Issued July-Sept., 1976

Air Compliance

July 13
Dairy Mart Farms, Inc.
Permit to operate a boiler in Enfield

July 20
F. L. Roberts & Co., Inc.
Permit to operate a gasoline storage
tank in Rocky Hill

July 20
Fournier Street Animal Shelter
Permit to construct a pathological in-
cinerator in New Haven

July 20
Shulz Electric Co.
Permits to construct and operate an in-
cinerator in New Haven

July 26
Hale Manufacturing Co.
Permit to construct a boiler in Stafford
Springs

July 28
Mr. Vincent J. Rotondo
Permits to operate a modified incinerator
and a new incinerator on Magee Ave. in
Stamford

July 28
The Torrington Co.
Permit to construct extension for the
expansion of a metal cleaning line

August 4 - Conditional Permit
The Stanley Works, Stanley Hardware Div.
Permit to operate extension for a modified
lithographing line in New Britain

August 4
Hospital of Saint Raphael
Permit to operate three watertube pack-
aged boilers with oil burners in New
Haven

August 4
American Chemical & Refining Co.
Permit to construct a PECO Thermal Re-
ductor in Waterbury

August 9
Nestle Co., Maggi Div.
Permit to operate a watertube boiler in
New milford

August 9
Fountain Hill Cemetery
Permit to construct a pathological in-
cinerator in Deep River

August 9
Uniroyal Chemical
Permit to operate #2 boiler equipped with
a modified burner in Naugatuck

August 9
Enthone, Inc.
Permit to operate a 1,100 gallon blending
tank in West Haven

August 9
United Technologies, Hamilton Standard
Permits to construct a pyrolysis process
and an afterburner in Windsor Locks

August 16
Automatic Comfort Corp.
Permit to construct a gasoline truck
loading rack with a thermal oxidizer in
East Hartford

Permits Issued (cont.)

Water Resources

July 9
Cornfield Point Assoc.
Permit to retain and maintain two stone
groins

August 10
Hon. Thomas A. Benoit
Permit to perform flood restoration work
on the Hockanum River in Vernon

August 18
Town of Greenwich
Permit to place and maintain 222 cubic
yards of stone protection in Greenwich
Harbor at Greenwich

August 25
J. D. Kasper and Associates
Permit to construct an access roadway,
driveways, drainage work and also for
the relocation and channelization of a
brook in the Town of Monroe

August 25
Dominic Cappucutti
Permit to fill a wetland area for the
purpose of constructing a single family
dwelling in the Town of Wallingford.

September 3
Paul H. R. Waldron
Permit to place fill in Pine Island Bay
in Groton

September 7
City of Bridgeport
Permit to construct a concrete pipe
within Ox Brook in the City of Bridge-
port

September 7
Robert Maricondo
Permit to construct a drainage pipe
beneath Lawler Terrace and to replace an
existing pipe with a 48" RCP beneath
Cameo Road in the Town of Stratford

September 7
City of Stamford
Permit to construct a storm sewer and to
pipe a water course in connection with
that project in the City of Stamford

September 7
Malcolm Malchiodi
Permit to remove existing bridge culvert
located on the Muddy River and replace
with two pipes in the Town of Wallingford

September 7
Walter L. & Beatrice Johnson
Permit to dredge accumulated sediment
from an existing small pond in the Town
of Stamford

September 7
Richard N. Fiske
Permit to repair a dam on a tributary
to Mill Brook

September 7
John Buckey
Permit to construct a dam on a tribu-
tary of Stratton Brook

September 7
Nicholas E. Owen II
Permit to construct drainage pipes
across lots #16 and #17 in Old Coach
Estates in Stratford

September 9
Fish and Water Life Unit, Conn. D.E.P.
Permit to construct and maintain a boat
launching, revetment and stone groin in
Little Narragansett Bay

September 9
Alfred B. Carbone, Sr.
Permit to maintain fill along Piper
Brook, Newington

September 9
Ms. Martha A. Steinberg
Permit to place fill and construct a
paved parking area along the Connecticut
River in Portland

September 9
Town of Wallingford, Dept. of Public
Utilities
Permit to cross the Quinnipiac River with
a water main and place fill along the
Quinnipiac River

September 9
Hon. Leo C. Tetreault
Permit to install a dry type fire hydrant
in the Quinnipiac River in Putnam

September 9
Housatonic River Marina
Permit to retain and maintain a filled
area and place three floats on the
Housatonic River in Stratford

September 9
The Bilco Company
Permit to maintain and retain rock fill
along the New Haven Harbor shoreline in
West Haven

September 9
The United Illuminating Company
Permit to place and maintain a wooden
float in New Haven Harbor

September 9
Dahl Oil Company
Permit to retain and maintain fill
placed in the Thames River in Norwich

September 10
David Deitsch
Permit to construct a warehouse within
an inland wetland in West Haven

Permits Issued (cont.)

Water Resources

September 10
Yacht Haven, Inc.
Permit to install mooring piles for temporary boat storage at Yacht Haven in Stamford

September 10
Town of Monroe
Permit to deposit fill material in Harshbarger Pond in the Town of Monroe

September 10
FIP Corporation
Permit to construct two office facilities and an access roadway within the Barnes Industrial Park - North in the Town of Wallingford

September 13
William Farrell
Permit to construct a box culvert for Rockledge Brook under Thorne Road in West Hartford

September 15
Gordon Bilides
Permit to fill and regrade a designated inland wetland area in the Town of Wallingford

September 20
Quassett Lake District
Permit to repair a dam on a tributary of Mill Brook in Woodstock

September 21
Town of East Haven - Econ. Develop. Comm.
Permit to develop 60 acres off Urrah Street in East Haven

Water Compliance

September 16
Frank A. Chase
Permit for milk center wash water discharge to the groundwaters of the Town of Somers



DEP citizens' bulletin

State of Connecticut
Department of Environmental Protection
State Office Building
Hartford, Connecticut 06115

Commissioner: Joseph N. Gill
Director, Info & Ed: Greg Sharp
Illustrator: Deborah Dumin
Layout: Rosemary Gutbrod
Phone: 566-5524

Librarians, Please Note:

Due to an oversight, last month's issue was designated Volume 3 Number 12. It should have been designated Volume 4 Number 1 (we publish only 11 issues per year). This month's issue is designated Volume 4 Number 2. You may wish to mark last month's copy to avoid confusion.

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